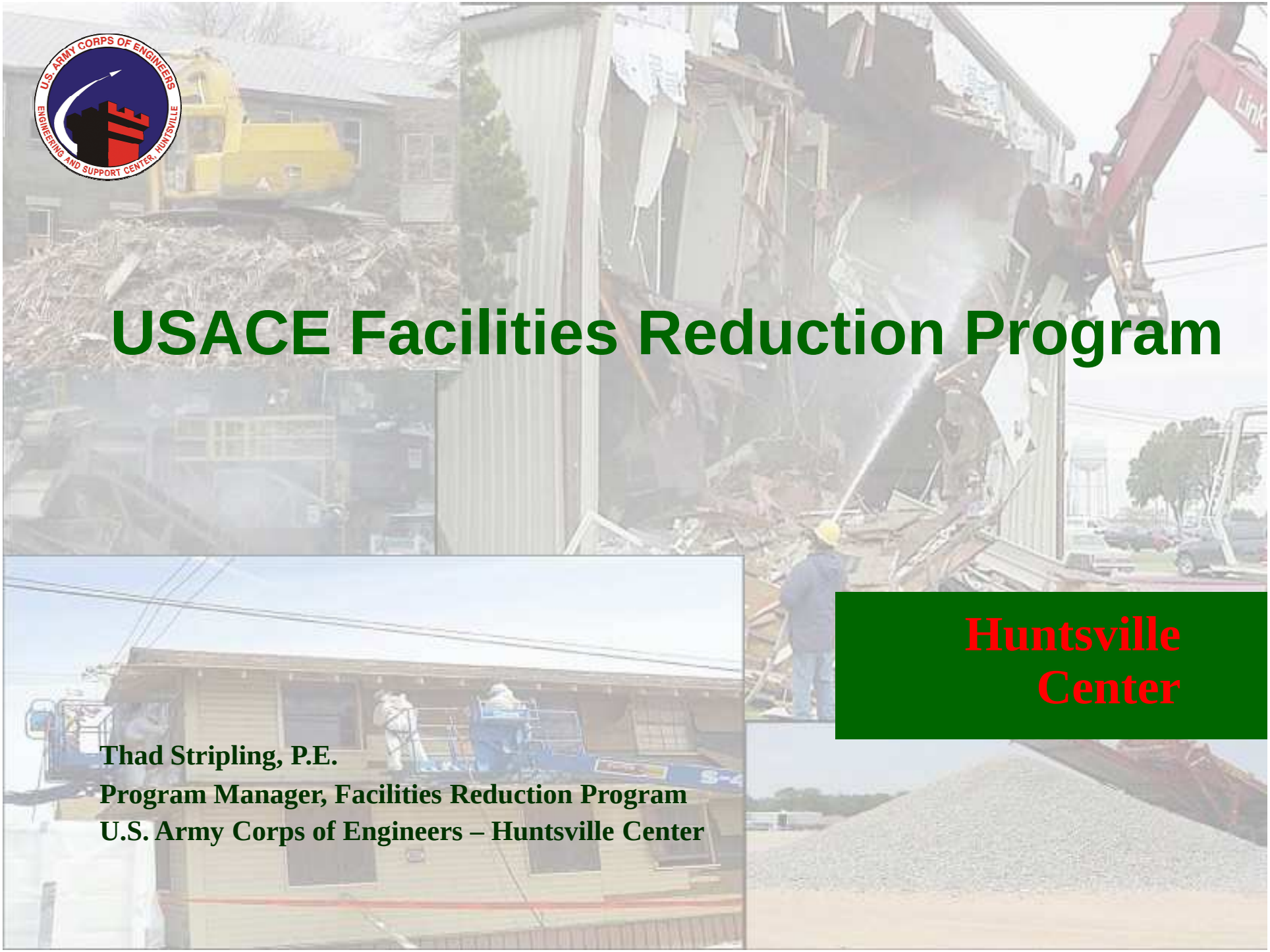


USACE Facilities Reduction Program

Huntsville Center

Thad Stripling, P.E.
Program Manager, Facilities Reduction Program
U.S. Army Corps of Engineers – Huntsville Center

Introduction

- FRP Background and Approach
- The FRP Mission
- FRP Benefits
- FRP Demolition Costs
- Historical Savings
- Achievements
- Range of FRP Services
- Project Execution Process
- FRP Contract Vehicles
- MAF Project Support

FRP Background & Approach

Background

- The primary mission of Army Installations and Corps of Engineer Districts is construction of new facilities and facility maintenance; not demolition
- 2004 Huntsville Center established the Facility Reduction Program (FRP) with a sole mission of demolition

Army Approach

- Centralized management within HNC
- Funds provided to HNC for distribution or contract award
- HNC consolidates Demolition requirements from Regional and Installation input.
- HNC performs due diligence review for funding eligibility, policy compliance, application of best practices and cost reasonableness.
- Higher Level approval is attained prior to making funding commitments

The FRP Mission

- Assist the Client Agency in the planning, prioritizing, estimating, approval, contracting, and execution of removal of excess facilities
- Recommend consistent policy and performance standards for the removal of facilities
- Develop new technology that will reduce cost, reduce waste materials, and improve schedule
- Define the project parameters: schedule, site restrictions, special conditions, etc
- Develop “Best Practice” removal method for each unique project to optimize execution schedule and reduce costs
- Minimize labor demands on Client installation personnel
- Prepare project requirements, methodology reviews, ACM assessments, budgetary estimates, project design, work plans, scope of work documents, procurement strategy, independent technical reviews, recommendations of priorities, contract award and management, supervision of removal actions, and project execution

FRP Benefits

Lower Costs

Installation Support

Out of the Box Thinking

C&D Diversion Quantity Visibility

Best Practices Toolbox

National IDIQ

Programmatic Planning

USACE FRP

Comprehensive Facility Removal Consulting and Execution Services

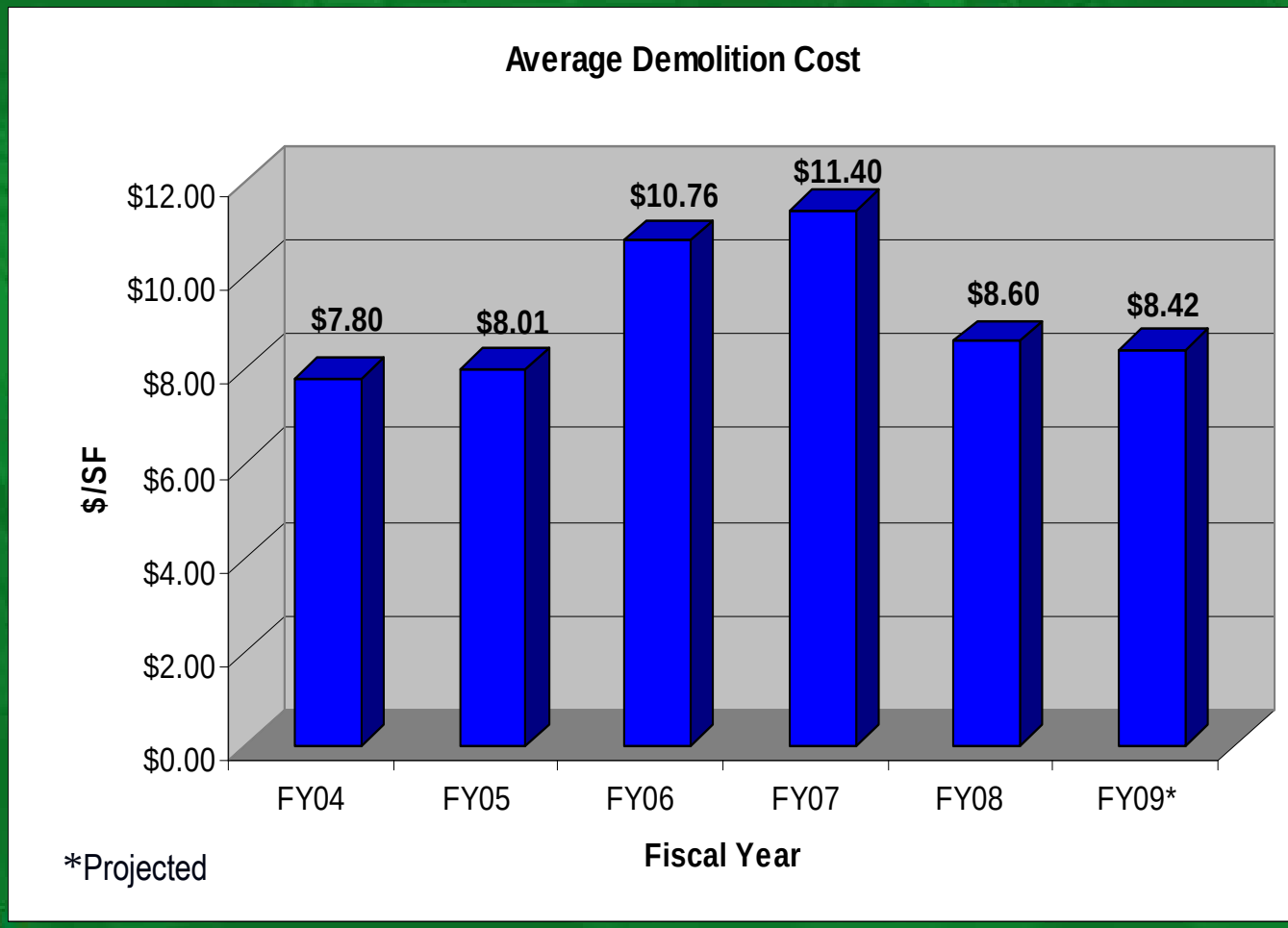
FRP Benefits

- Significantly lower costs
- Focused on schedule management
- Difficult historically expensive structures removed
- Eliminate unnecessary actions such as LBP abatement
- Proper scope for environmental actions
- Crush concrete and utilize engineered backfill
- Account for scrap and recycle credits to offset price
- Use best fit contractors and contract methodologies for the task at hand vs. “the way we’ve always done it”
- Don’t settle for costs that are too high or schedules that are too long just to get it done or because its easier that way
- Demolition is managed by those who have Demolition as their No. 1 mission

FRP Benefits (cont)

- Provide centralized planning to take advantage of economies-of-scale and schedule optimization
- Remove facilities with minimal manpower burden to Customer
- Demolition and Environmental industry experts provided under consulting contracts
- Demolition MATOC contract vehicles
- Project Management, Contracting, Council, Estimating and Engineering In-House Staff
- Centralized status reporting via internet (EKO)
- Applied lessons learned - environmental issues, tricks-of-the-trade, contract pitfalls, and regional operating conditions
- The FRP Best Practices Toolbox database

FRP Execution Overview



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Historical Savings

Cost Savings Examples (2005-2008)

Location	Initial Funds Request	Demo Cost after CEHNC Assistance	Savings
Ft Myer	$3,100,000	$1,760,000	$1,340,000
Ft Hamilton	$3,300,000	$1,565,000	$1,735,000
Ft Leavenworth	$6,700,000	$3,700,000	$3,000,000
Japan	$1,200,000	$656,100	$543,900
Moffett Field	$5,240,000	$2,638,000	$2,602,000
Anniston AD	$3,691,155	$619,208	$3,071,947
Camp Navaho	$1,723,972	$995,045	$728,927
Tobyhanna AD	$1,900,000	$375,000	$1,525,000
TOTAL	$26,855,127	$12,308,353	$14,546,774

FRP Achievements

- **Technical**
  - Removed the Lead-based paint myth
  - Established third-party independent survey of ACM abatement
  - Perform government-funded demolition equivalent to the private sector in cost, methodology and performance
  - Developed repeatable methods and techniques of removal for common building structural types
- **Programmatic**
  - Created the FRP Best Practices Toolbox
  - Reduced Government costs for demolition management
  - Shortened the time between project start-up and execution
  - Brought competition into the removal process at all levels
  - Use contractors who do demolition as their primary business line

Range of FRP Services

Large or Complex Facilities

- Tencza Terrace, Ft Myer, VA Mission 13-story / 150,499 sf concrete frame. Used Implosion method. Concrete crushed on site. Cost - $8.54 sf
- Production Facility, Lake City, Blue Spring, MO 209,400 sf steel frame. Cost $8.11 sf.

Routine Facilities

- Barracks Group, Ft Polk LA - 41 WWII wood structures. 59,500 sf. Cost - $4.24 sf.
- Barracks Group, Ft Bragg, NC - 34 WWII wood structures. 150,000 sf. Cost - $5.60 sf.
- Barracks, Ft Hamilton, NY - 2-story/103,000 sf concrete frame & brick. Cost - $16.02 sf.

Project Execution Process

- Client provides list of project requirements
- Perform pre-demolition environmental survey
- Issue RFP Task Order and schedule pre-proposal site visit (if required)
- Demolition Contractors prepare/submit bid and proposal
- Evaluate proposals and award task order
- Contractor submits Accident/Safety Plan, ACM Abatement Plan, and Work Plan for FRP/installation approval
- Installation facility management/resident COE engineer provide QA oversight
- Execute ACM abatement plan
- Execute facility removal work plan
- Clean-up and Site restoration
- Contractor submits final report

FRP Contract Vehicles

- Demolition I (IDIQ)
- Demolition II (IDIQ being developed – available 3rd & 4th QTR 2009)
- 8a Purchase Orders (As Needed)
- Program Support and Expertise (IDIQ)
- Other Families of IDIQ Contracts such as FRR

Tencza Terrace – Ft Myer, VA

- Mission -- Remove AFH 13-story building in congested metro location
  - 150 living units / 150,499 sf
  - Cast-in-place concrete
- CEHNC assigned to contract and plan
  - Adopted industry best practices
- Required DoD, FAA, DDESB and USACE approval
- Used Implosion Method
  - Required 124 lbs of explosives
  - Concrete crushed on site – implosion crushed most & machines did the rest
  - Reduced cost 15% and duration 12%
  - Estimated at $8.54 sf
  - 91% of debris recycled/diverted

Tencza Terrace – Ft Myer, VA

The Demolition Process

Step 1 - abatement and soft demo starts from top down using elevator shaft to move equip and debris. Each floor stripped to the concrete shell

Step 2 – exterior concrete walls removed on floors 1, 3, and 7

Step 3 – columns/walls weakened in basement

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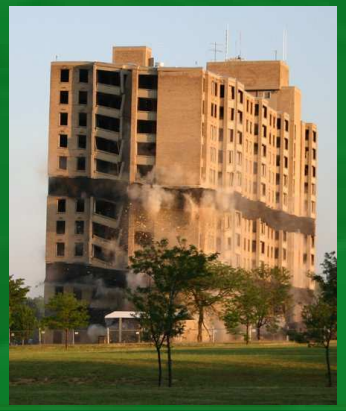
Tencza Terrace – Ft Myer, VA

Step 4 – test shot on one column

Step 5 – columns drilled, explosives set, fly protection put in place

Step 6 – shot fired and gravity brings the building down



Tencza Terrace – Ft Myer, VA

Step 7 – concrete crushing and cleanup

Step 8 – site restoration – included use of crushed concrete for backfill and re-grading slope

The Results

- Environmentally sensitive
- Economically sound
- Compliance with Army Policy
- Diversion quantities, means, and methods were in the contract and project work plan

Bldg 501 Tencza Terrace, Ft Myer VA		
Materials	Wt (Tons)	Percent
Total Materials Recycled	15,551.80	91.1%
Dry Wall	62	0.4%
Aluminum	9	0.1%
Copper	3.7	0.0%
Miscellaneous metals	45.5	0.3%
Rebar	500	2.9%
Concrete	14,917.00	87.4%
Cabinets and Doors	10	0.1%
Lead	0.1	0.0%
Electrical items	2	0.0%
Miscellaneous materials	2.5	0.0%
Total Material Disposed	1,512.80	8.9%
Asbestos tile	120	0.7%
Construction Debris	1,392.80	8.2%
Total Project	17,064.60	100.0%

Building 3A – Lake City AAP

- 209,000 SF industrial facility
- Demolished for $1.6M or $7.65 per SF
- Task Order included Site Visit, Explosives Sampling, Work Plans, Asbestos Flooring Removal, Demolition, and Site Restoration
- 910 tons of recycleable metals
- Project cost at today's scrap prices ($400/ton) would result in an additional $364K reduction in cost
- If awarded today, the project cost would be approximately $1.2M or $5.90 per SF

Building 3A – Lake City AAP (Before)

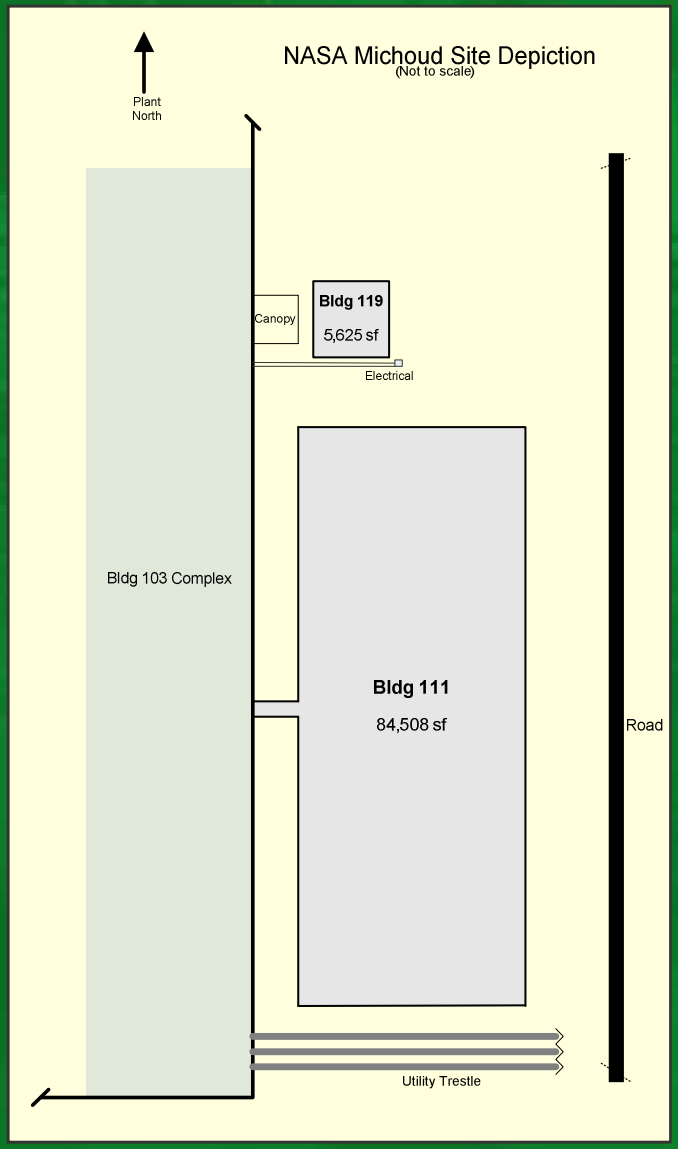
Building 3A – Lake City AAP (After)

NASA Project Support

Michoud Assembly Facility

Site Inspection March 2008

- Minimum cost – $35k
- Maximum data collection
  - Estimated quantity takeoffs and measured dimensions.
  - Conducted hazardous material assessment, estimated quantities, and developed ROM cost estimate.
  - Produced report with demolition and environmental assessment, project recommendations, site layout, building photographs, abatement and demolition estimates, and asbestos survey results.



NASA Project Support
Michoud Assembly Facility

Project Details

- Building 111 – concrete and steel frame / 1 & 2 story / 84,508 sf
  - Budgetary Estimate - $6.2M (NASA Real Property Asset Management Plan – December 2005)
- Building 119 - steel frame and masonry / 1 story / 5,625 sf
- Contract Award - $1,087,000

NASA Project Support
Langley Research Center

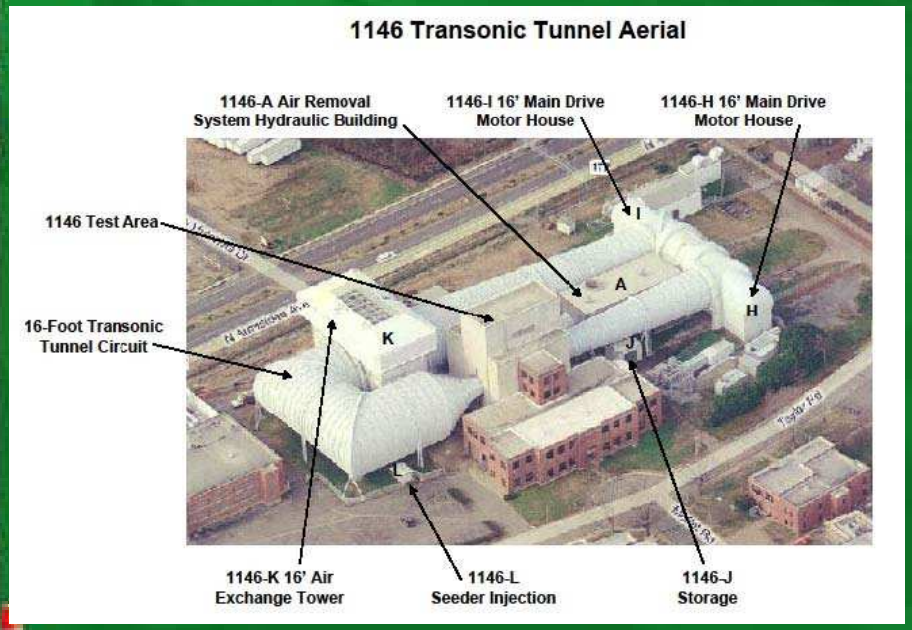
Project Details

- 25 Buildings – 43,200 sf
  - Estimated Demo Cost - $435,000
  - Expected Contract Award – late April 2009

NASA Project Support
Langley Research Center

Project Details

- Demolition of 4 wind tunnel complexes
  - Estimated Demo Cost - <$5,000,000
  - Expected Contract Award – 4QTR FY09



USACE FRP

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